

DAVYDENKO, Yu.A.

Stratigraphic cross section of the ore-bearing series of Bakal  
(Ural) based on recent data. Dokl. AN SSSR 144 no.5:1109-  
1112 Je '62. (MIRA 15:6)

1. Irkutskiy politekhnicheskii institut. Predstavleno akademikom  
N.M.Strakhovym.

(Bakal (Ural)--Geolog , Stratigraphic)

DAVIDENKO, Yu.A.

Weathering surface of Bakal iron ore deposits. Kora vyvstr.  
no.6:296-302 '63. (MIRA 17:9)

1. Irkutskiy politekhnicheskij institut.

DAVIDENKO, Yu.A.

Stratigraphy of the Bakal series in the Bakal ore zone (Urals).  
Izv.vys.ucheb.zav.; geol.i razv. 7 no.8:21-34 Ag '65.  
(MIRA 13:11)

1. Irkutskiy politekhnicheskii institut.

PHASE I BOOK EXPLOITATION

SOV/4463

Davydenko, Yu. I., and N.T. Nechayev

Osobennosti rasprostraneniya metrovykh radiovoln (Special Features in the Propagation of Metric Radio Waves) Moscow, Voenizdat, 1960. 170 p. No. of copies printed not given.

Ed.: P.I. Gmutikov; Tech. Ed.: A.N. Mednikova.

**PURPOSE:** This book is intended for military technical personnel engaged in the study of communications, radar, and television.

**COVERAGE:** The book covers a number of practical problems connected with the influence of existing conditions on the range and stability of communications realized in the metric wave band. Estimates are made of the influence of earth's surface, terrain topography, soil conditions, wooded areas, and various landmarks on radio-wave propagation in this band. Physical processes occurring during the radiation and propagation of radio waves are described. The authors' purpose is to give practical advice in securing communication for the most frequently found radio station locations. No personalities are mentioned. There are no references.

~~Card 1/4~~

DAVYDENKO, Yuriy Il'ich, kand. tekhn. nauk, inzh.-podpolkovnik;  
KRYLOV, M.V., red.; MEDNIKOVA, A.N., tekhn. red.

[Propagation of ultrashort radio waves and radio relay lines]  
Rasprostraneniye UKV i radioreleinye linii. Moskva, Voenizdat,  
1963. 133 p. (MIRA 16:6)  
(Radio waves) (Radio relay systems)

HELOZERSKIY, S.S., inzh.; VAYNBERG, I.B., inzh.; SOKOLIN, G.F., inzh.;  
DAVIDENKOV, A.K., inzh.

Using chromatographs. Mekh. i avtom. proizv. 19 no.4:41-42  
Ap '65. (MIRA 18:6)

KONDRAT'YEV, I.; ABRAMOV, I.; AKSENOV, I.; KOSTIN, A., inzh.; STADNICHUK, P.,  
mekhanik; DAVIDENKOV, N.; PALEYEV, G.

Supply of spare parts. Avt.transp. 43 no.3:26-29 Mr '65.

(MIRA 18:5)

1. Glavnyy inzh. Novokakhovskoy avtobazy (for Abramov).
2. Starokonstantinovskiy avtopark (for Stadnichuk).

DAVYDKIN, A.

Agricultural Machinery - Repairing

Wood as repair material, MTS 13, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.



DAVYDKIN, A.

Jig for straightening frames of the GAZ-51 motortrucks.  
Avt.transp. 38 no.7:49-50 J1 '60. (MIRA 13:7)  
(Motortrucks--Frames)

DAVYDKIN, B.

About the navigator's logbook. Grazhd.av. 12 no.6:12-14 Je '55.  
(MLRA 9:5)

1. Glavnyy shturman Grazhdanskogo vozdušnogo flota.  
(Logbooks) (Navigation (Aeronautics))

DAVYDKIN, B.

Navigational training is the most urgent duty of each commander.  
Grazhd.av. 12 no.1:12-13 Ja '55. (MIRA 16:3)

1. Glavnyy shturman Grazhdanskogo vozdushnogo flota.  
(Flight training)

DAVYDKIN, B.I.

DAVYDKIN, B.I., I.IA. KOZLOV, and T.B. ASATUR'IAN

Aeronavigatsiia i aviatsionnye pribory. Moskva, 1947.

Title tr.: Aerial navigation and aircraft instruments.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

DAVYDKIN, I. M.

DAVYDKIN, I. M. -- "The Dispersion of Light by Developed Photographic Layers." Min Culture USSR. Leningrad Inst of Cinema Engineers. Leningrad, 1955. (Dissertation for the Degree of Candidate of Technical Sciences.)

SO: Knizhnaya Letopis', No 5, Moscow, Feb 1956

DAVYDKIN, I.M.

BLYUMBERG, I.B.; DAVYDKIN, I.M.; KOROLEVA, V.V.

~~\_\_\_\_\_~~  
The possibility of using rubber hypo eliminators for the bordering  
layer. Trudy LIKI no.4:176-178 '56. (MLRA 10:5)

1.Kafedra obshchey fotografii i tekhnologii obrabotki finofoto-  
materialov.

(Photography---Developing and developers)

DAVYDKIN, I. M.

AUTHORS: Gorokhovskiy, Yu. N., and Davydkin, I. M. 48-11-8/13

TITLE: Light-Dispersion-Indicatrix Which Becomes Apparent With Photographic Layers on a Transparent Base. (Indikatrixy rasseyaniya sveta proyavlenymi fotograficheskimi sloymi na prozrachnoy podlozhke).

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1957, Vol. 21, Nr 11, pp. 1505-1516 (USSR).

ABSTRACT: This is a thorough investigation of the physical picture of light-dispersion by photographic blackening under various conditions and a calculation of both the integral and effective optic densities of the blackening is carried out on the basis of the measured dispersion-indicatrix. A visual goniophotometer was constructed for measuring the dispersion-indicatrix. The spatial geometric distribution of the light dispersed by the blackened samples on the transparent base was measured by means of this appliance. The obtained indicatrix of light-dispersion by blackening made it possible to clear up the mode of dependence of the dispersion capacity of the blackening from its parameters. 1) Various photographic materials show a similar behavior with respect to the general character of light-dispersion, but two blackenings of the same

Card 1/2

Light-Dispersion-Indicatrix Which Becomes Apparent With  
Photographic Layers on a Transparent Base.

48-11-8/13

optic density show a remarkably different dispersion-indicatrix of their micro-graininess of various materials. 2) The light-dispersion by blackening which was obtained to a certain degree as a result of the occurrence of an effect of contrast increases with the optic density. 3) The light-dispersion by blackening with a given optic density is the greater the higher is the coefficient of the effect of contrast. - With the help of the dispersion-indicatrix the values of the integral optic densities of blackening were calculated and compared with the direct test. The dependence of the optic density of blackening on the solid angle of the receiver was determined. From that also the data on the practically admissible minimum dimensions of the solid angles of the receiver by measuring the integral optic density were obtained. There are 10 figures, 1 table and 9 references, 5 of which are Slavic.

ASSOCIATION: Chair of General Photography and Technology of Film-Processing at the Leningrad Institute for Cinematographic Engineers (Kafedra obshchey fotografii i tekhnologii obrabotki plenki Leningradskogo instituta kinoinzhenerov).

AVAILABLE: Library of Congress.  
Card 2/2



Numerical Evaluation of the Dispersion of the Light With Photographic Blackenings on a Transparent Carrier. 48-11-9/13

dispersing properties of the blackenings. It is shown that the extent of the regular optic density requires a correction which takes account of the dispersed light of the directioned bundle passing through. It is pointed out that it is useful for this reason to differ the real from the apparently regular density of the blackening. The conception of an angle of dispersion was suggested for the relative evaluation of the dispersing blackening properties and for the indicatrix-form of the dispersion of blackening. There are 8 figures, 2 tables, and 13 references, 7 of which are Slavic.

ASSOCIATION: Chair of General Photography and Technology of Film Processing at Leningrade Institute for Cinematographic Engineers (Kafedra obshchey fotografii i tekhnologii obrabotki plenki Leningradskogo instituta kinoinzhenerov)

AVAILABLE: Library of Congress

Card 2/2

SOV/77-3-6-7/15

Investigations of the Densitometry of **Blackening**

I. The Light Scattering by Developed Photographic Films.

indicatrices, a visual wedge-type goniophotometer (Fig. 1) was devised and used in connection with a low-voltage STs-62 point lamp. The measuring results are presented in the polar system of coordinates in logarithmic scale. The obtained accuracy in determination of the brightness by means of the goniophotometer was about  $\pm 5\%$  or  $\pm 0.02$  by logarithmic scale. Subsequent evaluation comprised scattering indicatrices with respect to brightness of certain blackening samples on Aero-rapid film in developer Nr 1 according to GOST 2817-50,  $\gamma = 1.5$  (Fig. 2 and 3), in developer Nr 2 according to GOST and in developer Size III A. Comparative figures and calculating results for the experimentally determined scattering and integral densities of the blackenings are presented (Table 1) and the curves of the dependence of the effective optical densities of the blackenings on the solid angle of the receiver shown (Fig. 5). Further graphic evaluations are

Card 2/3

SOV/77-3-6-7/15

Investigations of the Densitometry of Blackening  
I. The Light Scattering by Developed Photographic Films.

devoted to conditions of different values of gamma (Fig. 7).  
There are 2 diagrams, 6 graphs, 3 tables, and 11 references,  
7 of which are Soviet, 1 American, 1 French, and 2 German.

ASSOCIATION: Leningradskiy institut kinoinzhenerov (The Leningrad Institute of Motion Picture Engineers)

Card 3/3

L 17194-63 EWT (1)/EWT (m)/EDS/EED-2/EED(b)-3/EEO-2 AFFTC/ASD/APGC/LJP(C)/SSD  
ACCESSION NR: AR3004186 AR 8/0081/63/000/009/0094/0094

SOURCE: RZh. Khimiya, Abs. 9B615 66

AUTHOR: Blyumberg, I.B. Davy\*kin, I.M.

TITLE: Kinetics of chemi c o photographic processes in the processing of thick photographic layers  $\gamma$ D

CITED SOURCE: Tr. Leningr. in-ta kinoinzhenerov, vy\*p. 6, 1961, 33-42

TOPIC TAGS: photographic chemistry, thick photographic layer, photoemulsion, kinetics, diffusion kinetics, fixation, development, ammonium thiocyanate, silver bromide

TRANSLATION: The kinetics of the processes of development and fixation of thick-layered photoemulsions, designed for the registration of ionizing radiations, <sup>9</sup> is discussed. It is shown that the process of development of traces of particles obeys the laws of chemical kinetics. This means that the temperature coefficient of the rate of the process is large, while changes in the pH, pBr and concentration of the developing substance have a great influence on the rate of the

Card 1/2

L 17194-63  
ACCESSION NR: AR3004186

process. The development of blackenings with large values of the optical density proceeds according to diffusion kinetics, just as in the process of fixation. It is indicated that the breakdown of the boundary layer during the cold stage of development, fixation, and washing of the irradiated layers permits the acceleration of the treatment process. In view of the great duration of the fixation process (of the order of 150 hours for layers 1500  $\mu$  thick), the use of  $\text{NH}_4\text{CNS}$  as a solvent is proposed. A difficulty lies in the peptizing action of  $\text{NH}_4\text{CNS}$  on the gelatin layer and its dissolving action with respect to silver. M. Shpol'skiy

DATE ACQ: 19Jun63

SUB CODE: CH

ENCL: 00

Card 2/2

BLYUMBERG, I.B.; DAVYDKIN, I.M.

Diffusion of dyes in the gelatin gel. Usp. nauch. fot. 8:106-  
114 '62. (MIRA 17:7)

ELYUMBERG, I.B.; DAVYDKIN, I.M.

Mechanism of the penetration of the components of developing solution into the photographic layer. Part 1: The mechanism of penetration. Zhur.nauch.i prikl.fot.i kin. 8 no.1:3-10 Ja-Feb. '63. (MIRA 16:2)

1. Leningradskiy institut kincinshenerov (LIKI).  
(Photography—Developing and developers)

8/077/63/008/002/001/009  
A066/A126

AUTHORS: Elyumberg, I.B., Davydkin, I.M.

TITLE: The mechanism underlying the penetration of the components of a developer into photographic layers. II. The rate of penetration

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 8, no. 2, 1963, 81 - 86

TEXT: It is shown that the penetration rate of liquids into photographic layers is independent of the diffusion coefficient. Consequently, a photographic layer reaches a constant concentration of thiosulfate within 30 min, whereas a constant concentration of water is reached not before 48 h. This is attributed to the fact that thiosulfate does not combine with the gelatin, which indicates that the penetration rate of thiosulfate is much higher than that of water. An Abbe refractometer was used to investigate the thiosulfate concentration as a function of the penetration depth into an 8% gel. A concentration of 0.02 mole/l of thiosulfate in the gel could be established at a distance of 1,000  $\mu$  from the gel surface after 1 min at 1 mole of external solution, and after 2.5 min at 0.1

Card 1/2



8/077/63/008/002/001/009  
A066/A126

The mechanism underlying the penetration of ....

mole. Concentration as a function of time and of the distance from the gelatin surface is given by

$$C(x, t) = C_0 \left\{ 1 - \frac{4}{\pi} \sum_{n=0}^{\infty} \frac{1}{(2n+1)^2} \sin \frac{2n+1}{2l} \pi x e^{-\frac{(2n+1)^2 \pi^2 D t}{l^2}} \right\} \quad (1)$$

where  $D$  is the diffusion coefficient of the substance in the gelatin,  $C_0$  is the concentration of the substance in the solution,  $x$  is the distance from the gelatin surface,  $l$  is the thickness of the layer. Equation (1) is valid if the thickness of the boundary layer is small compared to that of the layer. Using the first terms of Equation (1), the time elapsing until a definite concentration is reached is obtained as

$$t = \frac{4l^2}{\pi^2 D} \ln \frac{4}{\pi} \frac{C_0}{C_0 - C}$$

with an error of  $< 1\%$ . Practical applications of the results obtained are discussed. There are 3 figures and 4 tables.

ASSOCIATION: Leningradskiy institut kinoinzhenerov (LIIKI) (Leningrad Institute for Film Engineers)

SUBMITTED: January 28, 1961

Card 2/2

DAVYDKIN, I.M.

Substance diffusion from water solutions into the gel of gelatin. Part  
1: Continuous changes in the concentration of the substance at the dif-  
fusing media. Zhur.nauch. i prikl.fot. i kin. 9 no.4:241-248 JI-Ag '64.  
(MIRA 17:10)

1. Leningradskiy sel'skokhozyaystvennyy institut.

DAVYDKIN, I.M.

Diffusion of the substance from an aqueous solution into gelatin gel. Part 2: Jump of the substance concentration at the boundary of the diffusing media. Zhur. nauch. i prikl. fot. i kin. 9 no.5:327-332 S-O '64.

(MIRA 17:10)

1. Leningradskiy sel'skokhozyaystvennyy institut.

DAVIDKIN, Pavel Karpovich; VASIL'YEVA, O.S., red.; PASHCHENKO, O.V.,  
red.kart; SMIRNOVA, M.I., tekhn.red.; DZHATIYEVA, F.Kh.,  
tekhn.red.

[Reader on the physical geography of the U.S.S.R.] Khrestc-  
matia po fizicheskoj geografii SSSR. Moskva, Gos.uchebno-  
pedagog.izd-vo M-va prosv.RSFSR, 1959. 351 p. (MIRA 13:2)  
(Physical geography)

DAVYDKOV, B.N., inzh.

Studying airstreams in the combustion chambers of diesel engines with direct injection of fuel. Trakt. i sel'khoz mash. no.7:8-10 J1 '64.

(MIRA 18:7)

1. Gosudarstvennyy soyuznyy nauchno-issledovatel'skiy traktorny institut.

DAVYDKOV, B.N., inzh.

Rotary-piston engine developed by Felix Wankel. Trakt. i sel'khoz mash.  
30 no. 11:44-46 N '60. (MIRA 13:12)  
(Germany—Gas and oil engines)

COUNTRY : USSR  
CATEGORY : GENERAL & SPEC. ZOOLOGY, INSECTS . Harmful Insects and Mites.  
ABS. JOUR : Ref Zhur - Biologiya, No. 2 , 1959, No. 7028  
AUTHOR : Davydkov, I.  
INST. : Not given  
TITLE : Biological Method of Gipsy Moth Control.

ORIG. PUB.: Lesn. kh-vo, 1958, No.2, 39

ABSTRACT : A multiple-stage parasite brooder is described. At the end of winter the eggs laid by the gipsy moth are placed (with the covering) in the parasite brooder. When the caterpillars hatch twigs with developing buds are placed with them. Every day the twigs with the caterpillars are destroyed and replaced by new ones until completion of the hatching of the caterpillars. When the gipsy moths begin egg-laying the parasite brooders are

STAN: 1/2

PLOTNIKOV, K.N.; MAYEVSKIY, I.V., doktor ekon.nauk; YEVSTAF'YEV, G.N.,  
kand.ekon.nauk; KONYUKHOV, V.D., nauchnyy sotrudnik. Prinimal  
uchastiy: DAVYDKOV, I.I., nauchnyy sotrudnik. ZAV'YALOVA, A.N.,  
red.; PONOMAREVA, A.A., tekhn.red.

[Potentials for reducing production costs] Rezervy snizhenia  
sebestoimosti produktsii. Moskva, Izd-vo ekon.lit-ry, 1962.  
333 p. (MIRA 15:4)

1. Akademiya nauk SSSR. Institut ekonomiki. 2. Direktor Instituta  
ekonomiki AN SSSR, chlen-korrespondent AN SSSR (for Plotnikov).
3. Institut ekonomiki AN SSSR (for Yevstaf'yev).  
(Costs, Industrial)



DE VYDROV, N. I.

1194. FRACTIONAL ANALYSIS OF COAL POWDERS. Danyukov, N. I. (Roukh, Rabot. Vsesoyuz. Nauch.-issled. Inst. (Trans. All-Union Coal Inst., U.S.S.R.), 1955, (9), 36-51; instr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1956, (10), 50052). A test laboratory electrical centrifuge running at 1600 to 6200 rev/min was used. Sample containers for the sleeves in the centrifuge consists of a 50 to 60 ml. beaker and a pipette funnel with constrictions and placed in it. After 2 to 3 minutes centrifuging in carbon tetrachloride for coal powders with specific gravities below 1.6, or bromoform for those with specific gravities over 1.6, the lighter fraction remains in the funnel and the heavy fraction separates out at the bottom of the beaker. Preparation of samples, methods of division and results are described.

DAVYDKOV

GIREVA, Z.G., inzhener; DAVYDKOV, N.I., inzhener.

Investigation of wet jigging in a laboratory pistonless jigging machine.  
Nauch.rab. VUGI no.9:52-67 '53. (MLRA 7:6)

1. Laboratoriya obogashcheniya ugley. (Coal washing)

DAVYDKOV, N. I.

MELIK-STEPANOVA, A.G., inzhener; KARPOVA, N.N., inzhener; CHERNENKO, B.G.,  
kandidat tekhnicheskikh nauk; DAVYDKOV, N.I., inzhener.

Results of investigating the preparation properties of coals which are  
difficult to analyse. Nauch.rab. VUGI no.9:68-85 '53. (MLRA 7:6)

1. Laboratoriya obogashcheniya ugley. (Coal--Analysis) (Coal--Preparation)

DAVIDOV, N.I., gornyy inzhener.

From experience of industrial practice of coal preparation in  
heavy solution media. Ugol' 30 no.11:35-39 N '55. (MIRA 9:2)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut Ugleoboga-  
shcheniye.

(Coal preparation)

DAVIDKOV, N.I.

Preparation of low-grade coking coals without preliminary removal of dust and tailings. Ugol' 31 no.12:31-33 D '56. (MLRA 10:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut Ugleobogoshcheniya.

(Coal preparation)

DAVYKOV, N.I., insh.

Apparatus for laboratory filtration of flotation products and  
sludges. Ser. inform. po obog. i brik. ugl. no.1:45-46 '57.  
(Filters and filtration) (Flotation) (MIRA 11:4)

DAVYDKOV, N.I., inzh.

Organizing the flotation department of the Karaganda mine No.105  
coal preparation plant. Sbor.inform. po obog. i brik.ugl.  
no.2:11-18 '57. (MIRA 11:5)

(Karaganda Basin--Coal preparation) (Flotation)

DAVYDKOV, N.I., inzh.

Sludge recovery at the Tkvarcheli Central Preparation Plant. Sbor.  
inform. po obog. i brik. ugl. no.2:18-24 '57. (MIRA 11:5)  
(Tkvarcheli--Coal preparation)



DAVYDKOV, N.I., inzh.

Sludge treatment by the "Convertol" method. Obeg. 1 brik. ugl.  
no. 5:46-48 '58. (MIRA 12:9)  
(Coal preparation) (Flotation)

DAVYDKOV, N.I., inzh.; FEDOROVA, A.M., inzh.

Calculating the economic efficiency of pulp flotation with  
preparation of two or three products. Obog. i prik. ugl. no.7:  
24-28 '58. (MIRA 12:7)

(Coal preparation) (Flotation)

DAVYDKOV, N.I., inzh.

Operations of coal preparation plants with a closed cycle  
water-sludge treatment flowsheet. Obog. i brik. ugl. no.8:  
3-5 '58. (MIRA 12:10)

(Coal preparation)

DAVYDKOV, N.I., inzh.

Results of investigating the performance of flotation machines.  
Obog. 1 brik. ugl. no.9:32-37 '59. (MIRA 12:9)  
(Flotation--Equipment and supplies)

DAVYDKOV, N.I., inzh.

Coal pulp flotation in the Karaganda Basin coal preparation plants.  
Obog. 1 briq.ugl. no.10:14-18 '59. (MIRA 13:9)  
(Karaganda Basin--Coal preparation)

KHANZHONKOV, V.I.; DAVYDENKO, N.I.

Resistance of side holes in the end section of a pipe. Prom.  
aerodin. no.15:38-46 '59. (MIRA 13:8)  
(Aerodynamics)

DAVYDKOV, N.I.; FEDOROVA, A.M.

Concerning R.A.Geguchadze and V.S.Kaminskii's article "On the cleaning of Georgian coals for coking." Koks i khim. no.9:58 '60.  
(MIRA 13:9)

1. Nauchno-issledovatel'skiy institut Ugleobogashcheniya.  
(Coal preparation)  
(Geguchadze, R.A.) (Kaminskii, V.S.)

DAVYDKOV, N.I., inzh.

Purification from sludge of circulating water in coal preparation plants.  
Obog. i brik. ugl. no. 14:36-46 '60. (MIRA 14:5)

(Coal preparation plants) (Water—Purification)



DAVYDKOV, N.I., inzh.

Introducing the new water-pulp system with successive use of water  
cascades in coal preparation plants. Ugol' 36 no.3:53-55 Mr. '61.  
(MIRA 14:5)

1. Nauchno-issledovatel'skiy institut ugleobogashcheniya.  
(Coal preparation)

SKLOVSKAYA, A.A., otv. red.; DREMAYLO, P.G., inzh., sam. otv. red.; KAMINSKIY, V.S., kand. tekhn. nauk, zam. otv. red.; AVETISYAN, A.N., red.; BRILLIANTOV, V.V., kand. tekhn. nauk, red.; GALIGUZOV, N.S., kand. tekhn. nauk, red.; GORLOV, I.P., red.; GREBENSHCHIKOV, V.P., red.; DAVIDKOV, N.I., red.; ZVENIGORODSKIY, G.Z., red.; KARPOVA, N.N., red.; KOZKO, A.I., red.; MARUSEV, P.A., red.; PONOMAREV, I.V., red.; POPUTNIKOV, F.A., red.; SOKOLOVA, M.S., kand. tekhn. nauk, red.; TURCHENKO, V.K., red.; FILIPPOV, V.A., red.; YUSIPOV, A.A., red.; YAGODKINA, T.K., red.; MIRONOVA, T.A., red. izd-va; LOMILINA, L.N., tekhn. red.; MAKSIMOVA, V.V., tekhn.red.

[Technological trends in coal preparation] Tekhnicheskie napravleniya obogashcheniya uglei. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry po gornomu delu, 1963. 120 p. (MIRA 16:10)

1. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley. 2. Gosudarstvennyy proyektno-konstruktorskiy i nauchno-issledovatel'skiy institut po obogashcheniyu i briketirovaniyu ugley (for Yagodkina, Brilliantov).  
(Coal preparation)

DAVYDKOV, V.

The animal breeders from Ryazan are faithful to their word.  
Sov.profsoiuzy 7 no.24:31-34 D '59. (MIRA 12:12)

1. Predsedatel' Ryazanskogo obkoma profsoyuzn rabochikh i  
sluzhashchikh sel'skogo khozyaystva i zagotovok.  
(Ryazan Province---Stock and stockbreeding)

DAVYDKOV, V.I.

Improving operating procedures and organization of repair of  
electric locomotives. Elek.i tepl.tiaga 4 no.1:13-14  
Ja '60. (MIRA 13:4)

1. Starshiy master tsekha periodicheskogo remonta lokomotivnogo  
depo Tula.

(Electric locomotives--Maintenance and repair)

DAVYDKOVA, N.A.; NAYMARK, D.A.

Two cases of congenital toxoplasmosis. *Pediatrics* 38 no.10:  
69-70 0 '60. (MIRA 13:11)

1. Iz gorodskoy prozektury Barnaula (zav. - kand.med.nauk  
S.F. Yushkov).  
(TOXOPLASMOSIS)

DAVYDOCHKIN, A.N., kand.geol.-mineral.nauk

Determining the strength of cold asphalt concrete using ball-shaped stamps. Avt. dor. 24 no. 1:24-26 Ja '61. (MIRA 14:2)  
(Asphalt concrete---Testing)

DAVYDOR, YU. P.

PHASE I BOOK EXPLOITATION

SOV/4961

Akademiya nauk SSSR. Institut mashinovedeniya

Tekhnologicheskii smazki dlya obrabotki metallov davleniyem (Industrial Lubricants Used in Pressworking of Metals) Moscow, Mashgiz, 1960. 96 p. 5,000 copies printed.

Sponsoring Agency: Institut mashinovedeniya Akademii nauk SSSR.

Ed.: A. V. Korolev, Candidate of Technical Sciences; Ed. of Publishing House: G. N. Soboleva; Tech. Ed.: L. P. Gordeyeva; Managing Ed. for Literature on Heavy Machine Building: S. Ya. Golovin, Engineer.

PURPOSE: This collection of articles is intended for scientific and technical personnel, production engineers, and students in schools of higher technical education and tekhnikums.

COVERAGE: The book contains articles analyzing the research on industrial lubricants used in pressworking of metals conducted by various institutes and plant laboratories. It is stated that these lubricants improve the metal-forming process and increase the wear resistance of tools (dies), thereby

Card 1/3

Industrial Lubricants Used (Cont.)

SOV/4961

increasing the quantity and quality of production. Also included are papers discussed at an All-union convention on industrial lubricants held under the auspices of the Komissiya po tekhnologii mashinostroyeniya Instituta mashinovedeniya AN SSSR (Commission for Machine-Building Processes of the Institute of Science of Machines, AS USSR). No personalities are mentioned. References accompany some articles and are all Soviet.

TABLE OF CONTENTS:

Isachenkov, Ye. I. Application of Principles of the Hydrodynamic Lubrication Theory to Stamping Processes	3
Korolev, A. V. On the Problem of Testing Industrial Lubricants Used in Cold Stamping of Sheet Steel	15
<u>Davydor, Yu. P. Friction and Lubrication in Stamping Sheet Steel and Alloys</u>	24

Card 2/3



Industrial Lubricants Used (Cont.)

SOV/4961

Sil'tsova, M. A. Industrial Lubricants Used in Deep Drawing of Parts From Steel Sheets (Experience of the Gor'kovskiy Avtomobil'nyy Zavod [Gor'kiy Automobile Plant])

37

Khabarov, N. D. Search for New Lubricants Used in Extrusion of Aluminum-Alloy Semiproducts

51

✓ Davydov, Yu. P. Investigating the Effect of Lubricants in Metal Stamping

65

Smirnova, A. G. New Lubricants For Wire Drawing

81

Konoplina, V. I. Methods of Evaluating the Quality of Lubricants Used in Pressworking of Metals

91

AVAILABLE: Library of Congress (TS213.A36)

Card 3/3

VK/dfk/os  
4/20/61

DAVIDOV, A.; KUNYAVSKIY, M.; MALEVICH, L.; PROSHLYAKOV, V.P.: Prinimali uchast'ye: SHAIPO, A.F.; CHERVIYAKOV, P.Ya.; OHLIYANCHIK, M.F., starshiy inzh.; REVUTSKIY, F.A., starshiy pochvoved; GUSEL'NIKOVA, O.I., inzh.; GORN, Ye.R., tekhnik; MORKOVINA, T.M., tekhnik. BONDARENKO, M., red.; BAKHTIYAROV, A., tekhn.red.

[General plan for organizing the territory of the Golodnaya Steppe]  
General'naya skhema organizatsii territorii Golodnoi stepi.  
Tashkent, Gosizdat-vo Uzbekskoi SSR, 1958. 189 p.

(MIRA 14:3)

(Golodnaya Steppe--Agriculture)

DAVYDOV, A., pobeditel' final'nykh sorevnovaniy spartakiady; KAZANKOV, S.,  
pobeditel' final'nykh sorevnovaniy spartakiady

Automobile-model racing. Za rul. 16 no.10:7-8 0 '58.  
(MIRA 12:1)

1. Vtoryye Vsesoyuznyye sorevnovaniya po avtomodel'nomu sportu,  
Rostov-na-Donu.

(Automobiles--Models)

DAVYDOV, A., master avtomodel'nogo sporta

Racing-automobile model of the 2,5 cu.cm.class. Za rul. 17 no.4:19  
Ap '59. (MIRA 12:6)

(Automobiles, Racing--Models)

DAVYDOV, A., inzh.; YEREMINA, G., inzh.

Deoxidization of water. Zhil.-komm.khoz. 9 no.8:18-19 '59.

(MIRA 12:11)

(Water heaters--Corrosion and anticorrosives)

DAVYDOV, A.

Clear and efficient regulations. Izobr. i rats. no.11:41 № '60.  
(MIRA 13:10)

1. Nachal'nik otдела po izobretatel'stvu i ratsionalizatsii Minister-  
stva sel'skogo khozyaystva SSSR.  
(Agricultural machinery--Technological innovations)

DAVYDOV, A., inzh. (g.Sverdlovsk)

Time relay using a TG-1<sup>B</sup> thyratron. Radio no.7:46-47 J1 '61.  
(MIRA 14:10)

(Electric relays)

DAVIDOV, A., polkovnik

Communists are responsible for Communist Youth League  
affairs. Komm. Vooruzh. Sil 46 no.19:66 0 '65.

(MIRA 18:12)



DAVIDOV, A., polkovnik; YENYUTIN, B., kapitan 1 ranga

Provided for by the situation. Starsh.-serzh. no.5:28 My '62.

(MIRA 15:6)

(Russia--Armed forces--Classification)

DAVYDOV, A., gvardii polkovnik, kand.istoricheskikh nauk; YELESIN, N.,  
polkovnik, kand.istoricheskikh nauk

The 22d Congress of the CPSU on tight discipline and good organiza-  
tion. Komm.Voen. Zh. 2 no.11:50-56 Je '62. (MIRA 15:5)  
(Military discipline)

DAVYDOV, A.

"Manual for the therapist" by A.D.Adenskii. Reviewed by  
A.Davydov. Zdrav.Bel. 8 no.2:70-73 F '62. (MIRA 15:11)  
(THERAPEUTICS)  
(ADENSKII, A.D.)

DAVYDOV, A. A.

"Theory of Light Absorption by Molecular Crystals."

Thesis for degree of Dr. Physicomathematical Sci.

Sub 26 Sep 49, Physics Inst imeni P. N. Lebedev, Acad Sci USSR.

Summary 82, 18 Dec 52, Dissertations Presented for  
Degrees in Science and Engineering in Moscow in 1949.  
From Vechernyaya Moskva, Jan-Dec 1949.

AUTHORS: Davydov, A.A. and Litovchenko, N.V. SOV/130-58-7-15/35

TITLE: Improvement of a Wire Mill (Usovershenstvovaniye provolochnogo stana)

PERIODICAL: Metallurg, 1958, Nr 7, pp 30 - 31 (USSR).

ABSTRACT: The authors recall the early history of the foreign-built 250 continuous wire mill at the Magnitogorsk Metallurgical Combine and mention some design faults revealed and corrected and give an account of the present operation of this mill. It produces mainly 6.5-, 7- and 8-mm diameter wire rod, from 58x58x9300 mm billets which are heated to 1 200 °C. The author describes the present roll pass design, compares the present with early operating indices and gives the rolling speed as 26.3 m/sec (compared with the rated maximal value of 21.5). He outlines some of the equipment changes which have followed and mentions some automation which has been introduced. The author names the following as having played or being about to play important parts in the development and operation of the mill: K.I. Burtsev (now of the Chelyabinsk economic council), Engineer A.A. Petrov, A.L. Pinegin, B.I. Burylev, P.R. Petrov, N.H. Toknyanin, I.G. Zybenskiy, M.S. Rayevnin, P.V. Aksenov, S.Ya. Nizhnik, N.H. Gur'yanov,

Card 1/2

Improvement of a Wire Mill

SOV/130-58-7-15/35

I.G. Yurin, A.S. Kalinich, V.Nikitin, M. Mochil'skiy,  
I.Ye. Govgalenko, G.I. Chesnokov, I.N. Sabel'nikov, I.S.  
Martynov, N.T. Gomofov, A.M. Derovyankin, M.M. Farion,  
Ye.S. Rayevnina, V.N. Mel'nikova, Z.Ya. Kostenko, M.P.Shtodina,  
G.Popova, M.P. Astapova and Ye. T. Meshchukova.  
There is 1 figure.

ASSOCIATION: Magnitogorskiy metallurgicheskiy kombinat  
(Magnitogorsk Metallurgical Combine)

Card 2/2

1. Rolling mills--Operation 2. Wire--Manufacture

USSR/Technical Crops. Oil Plants. Sugar Plants.

M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77775.

Author : Davydov, A.A.; Ardashev, M.I.

Inst : \_\_\_\_\_

Title : On the Cultivation of Oil-Bearing Crops in  
Bashkiriya.

Orig Pub: V sb.: Mashlichn. kul'tury v vost. r-nakh SSSR,  
Krasnodar, "Sov. Kuban'", 1956, 36-44.

Abstract: The conditions of Bashkiriya allow the successful cultivation of kudryash flax (*Linum usitatissimum*), sunflower, mustard, *Lactarius deliciosus*, poppy. The problem of cultivation of *Ricinus communis* and *Crambe* requires additional study.

Card : 1/1

113

USSR / Cultivated Plants. General Problems.  
APPROVED FOR RELEASE: Thursday, July 27, 2000

M-1

CIA-RDP86-00513R00050982

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58484

Author : Davydov, A. A.

Inst : Ministry of Agriculture USSR

Title : Increase and Implantation in the Production of New  
Varieties by the State Varieties Network (Gosortset')  
of the Bashkir ASSR

Orig Pub : Inform. byull. Gos. komiss. po sortoispyt. s-kh. kul'-  
tur pri M-ve s.-kh. USSR, 1957, No 6, 17-19

Abstract : This is a brief report on the increase in sowing of  
regional varieties of rye, summer wheat, buckwheat,  
peas, vetch, Sudan grass and foxtail millet (mohar)  
during 1951-1956.

Card 1/1

On the Analytic Determination of the Sulfo Acids  
of the Anthraquinone

SOV/32-25-8-9/44

the-analysis of  $\alpha$ -(SA) the following reagents are recommended:  
1.30 - 1.31 g of the potassium salt of the  $\alpha$ -(SA), 100 ml of  
HCl (specific weight 1.19), 75 ml of 4n  $H_2SO_4$ , 2.0 g of  
 $K_2Cr_2O_7$  in 25 ml of water. The chlorination is rapid and uni-  
form. Yield of  $\alpha$ -(I) is 98.5 - 99.0% (Table of the reproduci-  
bility of the analysis). At the analytical chlorination of  
other (SA) ( $\beta$ -, 1.5-, and 1.8-) according to the last-mention-  
ed method, the time of adding the  $K_2Cr_2O_7$ -solution to the mix-  
ture must be prolonged to 2 hours and the mixture has to be  
boiled for from 2.5 to 3 hours. In the presence of sulfates  
of alkali- and alkaline earth metals weighing more than 25%  
of the weight of the (SA) lower results are obtained. In this  
case the analysis must be conducted with the use of a mixture  
of hydrochloric acid - sulfuric acid. There are 1 table and  
7 references, 5 of which are Soviet.

ASSOCIATION: Institut narodnogo khozyaystva im. G. V. Plekhanova (National  
Economy Institute imeni G. V. Plekhanov)

Card 2/2



DAVIDOV, A.A. (Moskva)

Method of exhaustive sampling. Mat. v shkole no.4:86-87 J1-Ag  
'61.

(MIRA 14:8)

(Mathematics--Problems, exercises, etc.)

KOZLOV, V.V.; DAVYDOV, A.A.

Anthraquinone series. Part 28: Characteristics of the reaction involving the chlorination of  $\alpha$ -anthraquinonesulfonic acid by salts of chloric acid. Zhur.ob.khim. 30 no.10:3456-3464 0 '61.  
(MIRA 14:4)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V.Plekhanova.  
(Anthraquinonesulfonic acid) (Chloric acid)

KOZLOV, V.V.; DAVYDOV, A.A.

Anthraquinone series. Part 32: Oxidative chlorination of  
anthraquinone- $\alpha$ -sulfonic acid. Zhur.ob.khim. 31 no.6:2049-2052  
Je '61. (MIRA 14:6)

1. Institut narodnogo khozyaystva imeni G.V.Plekhanova.  
(Anthraquinonesulfonic acid) (Chlorination) (Oxidizing agents)

KOZLOV, V.V.; DAVYDOV, A.A.

Anthraquinone series. Part 34: Special features of chlorination  
of  $\beta$ -sulfonic acid of anthraquinone to chloroanthraquinone. Zhur.  
ob. khim. 31 no. 11:3665-3667 N '61. (MIRA 14:11)

1. Moskovskiy institut narodnogo khozyaystva imeni G.V. Plekhanova.  
(Anthraquinonesulfonic acid) (Anthraquinone)

17.9/00

43404  
S/032/62/028/010/005/009  
B117/B186

AUTHORS: Davydov, A. A., and Maslov, V. N.

TITLE: Microoptical method of determining the crystallographic orientation of germanium

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 10, 1962, 1209-1210

TEXT: The method described here makes it possible to examine etch patterns and beams reflected from the etched surfaces simultaneously. For this purpose, a device was designed, which consists of a binocular magnifier, a Fedorov stage, and a step-down transformer. The latter feeds a small electric lamp which replaces one of the eyepieces. The beam reflected from the sample is viewed through the other eyepiece. The Fedorov stage is screwed on a heavy metal support with adjusting screws. Thin sections up to 5 mm thick are put on the stage and larger samples under it. Small crystals are kept by magnetic holders. This device can be used to determine deviations of the surface under examination from the (111) face within the range  $0 - 54^{\circ}44'$ . The minimum size of crystals or grains whose crystallographic orientation is determinable

Card 1/2

Microoptical method of determining...

S/032/62/028/010/005/009  
B117/B186

by the microoptical method does not exceed  $1 \text{ mm}^2$ . The determination of the orientation of a prepared sample deviating from the (111) face by  $30^\circ$  takes 3 to 5 min at the most, but that of a sample with a greater deviation takes about twice as long. The orientation of crystal faces of individual, large etch patterns can also be determined in this way. A comparison with X-ray diffraction showed that the accuracy of the micro-optical method is  $\sim 0.5^\circ$  and that it is determined by the degree of selectivity pertinent to the etching agent used. There are 2 figures.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskey promyshlennosti. (State Design and Planning Scientific Research Institute of the Rare Metals Industry)

Card 2/2

L 16916-63

ENP(q)/EWT(m)/BDS AFPTC/ASD JD

S/076/63/037/004/006/029

AUTHOR: Davydov, A. A., Maslov, V. N.

TITLE: Method for detecting heterogeneities in the specific resistance of germanium by the electrodeposition of copper

PERIODICAL: Zhurnal fizicheskoy khimii, V. 37, No. 4, 1963, 778-783

TEXT: The heterogeneity of distribution of admixtures throughout monocrystals of germanium and silicon is one of the main reasons for the varied parameters of semiconductor instruments and lowers the output of commercial products. Microheterogeneity of monocrystals can be determined by the electrolytic deposition of copper or another metal on a test sample. Using a pulse electrolysis regime the difference in the density of the precipitate caused by volumetric heterogeneities of the cathode material can be many times greater than when using direct current. The maximum coefficient of contrast of the deposition is obtained with pulse current wherein the interference from surface irregularities of the cathode and from gas formation is minimal. The design of the electrolytic cell is an important factor in the conduct of the experiment. The pattern of the deposition of copper is very sensitive to the geometry of the cell. There are 3

Card 1/2

L 16916-63

S/076/63/037/004/006/029

Method for detecting heterogeneities in the ...

figures. The most important English-language source reads as follows: R. S. Smith, J. Electrochem. Soc., 108, 238, 1961.

ASSOCIATION: Gosudarstvenny nauchno-issledovatel'skiy i proyektnyy institut red-kometallicheskey promyshlennosti (State Scientific Research and Design Institute of the Rare Metals Industry), Moscow

SUBMITTED: March 1, 1962

Card 2/2



ACCESSION NR: AP4041045

S/0120/64/000/003/0172/0174

AUTHOR: Davy\*dov, A. B.; Tsidil'kovskiy, I. M.

TITLE: Investigating the resistivity in a magnetic field at superhigh frequencies

SOURCE: Pribyor\* i tekhnika eksperimenta, no. 3, 1964, 172-174

TOPIC TAGS: semiconductor, semiconductor resistivity, semiconductor resistivity in magnetic field, SHF semiconductor testing

ABSTRACT: A T-bridge (see Enclosure 1) with well-decoupled arms is suggested for measuring the resistivity of semiconductors (within 1-1,000 ohm-cm and  $\Delta \rho / \rho_0 = 10^{-5}$ ) in a magnetic field. The klystron oscillator 3 feeds power, at 9,375 mc, via ferrite gate 5 to the H-arm; one-half the power goes into arm 2 with attenuator 6 and shorting plunger 7; the other half goes into arm 1 containing specimen 8 and plunger 9. The E-arm of the bridge, containing a ferrite gate and receiver 10, receives the power determined by the bridge tuning and side-arm

Card

1/2

ACCESSION NR: AP4041045

parameters. An SCh-2 frequency-spectrum analyzer with a sensitivity of  $5 \times 10^{-11}$  w was used as a receiver. The transverse resistivity of n-Ge specimens with 10 and 40 ohm-cm was measured at 300K, with various orientations of the magnetic field with respect to the crystallographic axes. The results for the 10-ohm-cm specimen corroborated G. L. Pearson's, et al., earlier measurements (Phys. Rev., 1951, 93, 763). Orig. art. has: 5 figures and 9 formulas.

ASSOCIATION: Institut fiziki metallov (Institute of Physics of Metals)

SUBMITTED: 25May63

ENCLs: 02

SUB CODE: EE

NO REF SOV: 003

OTHER: 003

Card

2/3

ACCESSION NR: AT4040554

S/2564/64/004/000/0095/0100

AUTHOR: Maslov, V.N.; Pelevin, O.V.; Yepifanova, K.I.; Davy\*dov, A.A.

TITLE: Crystallization of a film between germanium dendrites growing in parallel

SOURCE: AN SSSR. Institut kristallografi. Rost kristallov, v. 4, 1964, 95-100

TOPIC TAGS: germanium, germanium film, interdendritic film, film growth, germanium dendrite, germanium crystallization

ABSTRACT: The structure of interdendritic germanium films, grown in a symmetrical temperature field in a laboratory assembly with a melting capacity of 120 g of germanium, using argon as the atmosphere, was studied microscopically and metallographically. The assembly was suited for the preparation of 1.0-1.5 mm wide and 7-80  $\mu$  thick films at a rate of 60-90 mm/min at melt temperatures of 10-15C below the melting point. The process of crystallization of an interdendritic film is believed to consist of three stages: (1) the initial formation of the interdendritic film as an outgrowth of the base lamella from one dendrite into the interspace, until it merges with the parallel growing dendrite; (2) further

Card 1/2

ACCESSION NR: AT4040554

crystallization of the interdendritic film; and (3) growth of the outer layers of the base lamella of the interdendritic film as a result of migration of atoms from the side surface of the dendrites. The minimum film thickness corresponds to the lamella thickness. Orig. art. has: 5 figures.

ASSOCIATION: Institut kristallografi AN SSSR (Institute of Crystallography, AN SSSR)

SUBMITTED: 00.

DATE ACQ: 02Jul64

ENCL: 00

SUB CODE: IC, EC

NO REF SOV: 000

OTHER: 007

Card 2/2

ACCESSION NR: AT4040556

S/2564/64/004/000/0113/0116

AUTHOR: Maslov, V. N.; Davy\*dov, A. A.; Demenkov, N. M.; Nabatova, L. V.

TITLE: The twin structure of germanium dendritic bands

SOURCE: AN SSSR. Institut kristallografi. Rost kristallov, v. 4, 1964. 113-116

TOPIC TAGS: germanium, germanium monocrystal, germanium band, dendritic band, germanium dendritic band, germanium dendrite, germanium dendrite structure, germanium crystallization

ABSTRACT: This study was conducted to determine the characteristics of the optimum twin structure of germanium dendrites which would facilitate the preparation of uniform bands of considerable length. Dendrite bands 4 - 6 meters in length were grown at a rate of 80-100 mm/min from a melt brought to a temperature 10-13C below the melting point. The twin structure of the dendrite cross section was examined fractographically and microscopically. Additional etching by an alkaline etcher with potassium ferricyanide permitted comparison of the dislocation etching holes on the  $\langle 112 \rangle$  plane with peculiarities of the twin structure. Lamellae which were 7 microns thick were found to be most effective. Twin

Card 1/2

ACCESSION NR: AT4040556

structures, consisting of great numbers of lamellae differing greatly in thickness with closed layers which do not cross the band length fully, are the most susceptible to degeneration. Perfect lamellae without bends, steps and other signs of degeneration promote the preparation of long, thin, dendritic bands. Orig. art. has: 4 figures.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography, AN SSSR)

SUBMITTED: 00

DATE ACQ: 02Jul64

ENCL: 00

SUB CODE: IC, EC

NO REF SOV: 001

OTHER: 005

Card 2/2

ACCESSION NR: AP4027209

S/0286/64/000/006/0044/0044

AUTHOR: Maslov, V. N.; Davy\*dov, A. A.; Denenkov, N. M.

TITLE: Method of growing dendritic strips from a melt of semiconducting materials

SOURCE: Byul. izobret. i tovarn. znakov, no. 6, 1964, 44

TOPIC TAGS: semiconducting dendritic strip, semiconducting melt, semiconducting material

ABSTRACT: A method of growing dendritic strips from a melt of semiconducting materials, distinguished by the fact that in order to obtain strips with a uniform distribution of alloying impurities, the initial melt is subjected to heating primarily from below, and to a local cooling with an inert gas. The shape of the crystallization front and the crystallization rate are controlled by means of additional heaters, for which IR radiation sources are used, and the strip obtained is continuously skimmed off the surface of the melt in a horizontal plane.

ASSOCIATION: none

Gord

1/7 (

ACCESSION NR: AP4043186

S/0070/64/009/004/0472/0476

AUTHORS: Davy\*dov, A. A.; Maslov, V. N.

TITLE: Contribution to the theory of dendritic growth of germanium

SOURCE: Kristallografiya, v. 9, no. 4, 1964, 472-476

TOPIC TAGS: crystal growth, fiber crystal, twinning, crystallizing center, crystal nucleus

ABSTRACT: The purpose of the paper is to explain the experimentally observed large role of twin boundaries in the growth of dendrites with a diamond structure. The authors consider the form of an equilibrium two-dimensional nucleus on a (111) face of a crystal with the diamond structure, determine the free energy for the production of an equilibrium nucleus of critical dimensions, and determine the distribution function of critical equilibrium nuclei. Using an experimentally derived value for the excess free energy of an

Card 1/3



ACCESSION NR: AP4043186

atom contributing only one bond to the crystal, the authors find that for a supercooling of  $20^\circ$  crystallization on two-dimensional nuclei is already considerable. In considering the growth of a crystal having a twinning plane, it is found that the appearance of new atomic layers in the vicinity of the twin boundary depends strongly on the shape of the crystallization surface about this boundary. Three possible shapes occurring in a diamond structure are compared: the  $109^\circ$  twin boundary and the  $141^\circ$  and  $219^\circ$  boundaries. Comparison indicates that the production of a two-dimensional equilibrium nucleus on a  $141^\circ$  boundary requires about half the free energy needed for its production on an equilibrium face of the crystal. The production of a new atomic layer on the  $219^\circ$  boundary requires approximately twice the free energy needed for the production of such a nucleus on the single-crystal surface; the number of such nuclei on the  $219^\circ$  boundary is for this reason negligible. The growth of an infinite dendrite strip is always accompanied by participation in the growth of  $109^\circ$  and  $141^\circ$  units. The atomic layer

Card 2/3

ACCESSION NR: AP4043186

produced on the  $141^\circ$  boundary reaches the adjoining plane of twinning where it gives rise to a  $109^\circ$  boundary; hence the growth continues on the surface of the adjoining twin. The rate of growth of a dendrite is found to be determined by the rate of growth of new atomic layers on the  $141^\circ$  boundary. According to the calculations appreciable dendritic growth should start only at a supercooling of  $10^\circ\text{C}$  or more. Past experiments indicate that appreciable growth occurs even at  $2.5^\circ\text{C}$ , suggesting that the free energy of the crystal-melt boundary should be taken to be  $90 \text{ erg/cm}^2$ . Orig. art. has: 5 figures.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskey promyshlennosti (State Scientific Research and Planning Institute of the Rare Metal Industry)

SUBMITTED: 26Dec62

ENCL: 00

SUB CODE: SS

NR REF SOV: 001

OTHER: 004

Cord 3/3

L 16574-65 EWT(m)/EWP(t)/EWP(b) ESD(gs)/RAEM(r)/ESD(t)/SSD/AFWL/ASD(a)-5/  
AS(ep)-2/IJP(c) JI

ACCESSION NR: AP5000300

S/0070/64/009/006/0938/0939

AUTHORS: Maslov, V. N.; D'yakonov, L. I.; Davy\*dov, A. A.; Shaforo-  
stov, M. P. 3

TITLE: Epitaxial growing of germanium on the surface of germanium  
dendrites 1<sup>b</sup> 2<sup>1</sup>

SOURCE: Kristallografiya, v. 9, no. 6, 1964, 938-939, and insert  
facing p. 939

TOPIC TAGS: germanium, epitaxial growing, crystal growth, filament  
crystal

ABSTRACT: The authors describe the growth of an epitaxial layer of  
germanium on the surface of germanium dendrites. No earlier experi-  
mental data were published on the subject, nor were quantitative  
data given in earlier reports on epitaxial growth concerning the  
dependence of the growth rate on the gap between the source and the

Cord 1/5

L 16574-65

ACCESSION NR: AP5000300

0

substrate or on the profile of the epitaxial layer. The ribbons used were 2--3 mm wide and 0.20--0.30 mm thick. A diagram of the setup is shown in Fig. 1 of the enclosure. The film was deposited in a quartz ampoule 40 mm in diameter. The substrate and the source were at a specified distance between two graphite blocks intended for equalization of the temperature. The process is realized in an oven with the temperature drop between the blocks amounting to  $\sim 25^\circ$  in the interval from 700 to 1000C. The growth rate was shown to increase linearly with decreasing gap, reaching a maximum of  $9 \mu/\text{hr}$ , which is much higher than obtained by others. The epitaxial layer on the dendrite duplicates clearly the characteristic shape of the dendrite teeth. The tests have also shown that the resolution of the epitaxial deposition increases rapidly with decreasing gap between the source and the substrate. The dependence of the rate of deposition and of the resolution on the gap width are shown in Fig. 2 of the enclosure. Orig. art. has: 3 figures.

Card

2/5

L 16574-65

ACCESSION NR: AP5000300

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy proyektnyy  
institut redkometallicheskoj promyshlennosti (State Scientific  
Research and Design Institute of the Rare Metal Industry)

SUBMITTED: 18Apr64

ENCL: 02

SUB CODE: SS

NR REF SOV: 000

OTHER: 003

Card 3/5

L 16574-65  
ACCESSION NR: AP5000300

ENCLOSURE: 01

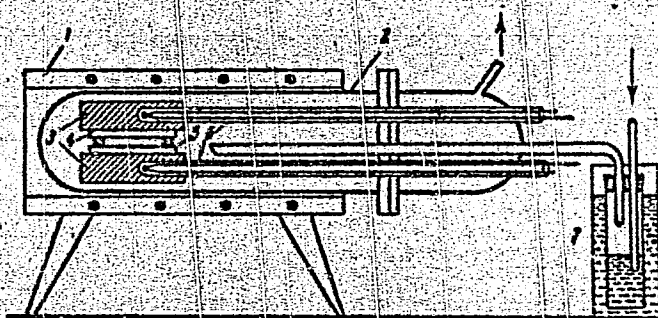


Fig. 1. Diagram of installation for epitaxial growing.

- 1 - Two-section oven, 2 - quartz ampoule, 3 - graphite blocks,
- 4 - source, 5 - substrate, 6 - quartz tubes with thermocouples,
- 7 - bubbler with water, immersed in cooling mixture

Card 4/5

L 16574-65

ACCESSION NR: AP5000300

ENCLOSURE: 02

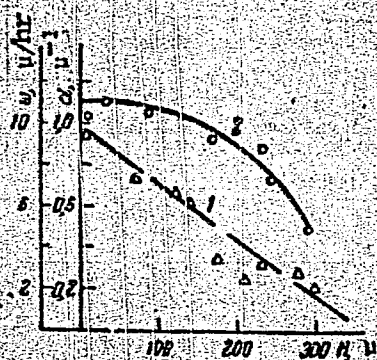


Fig. 2. Dependence of the settling rate  $w$  and of the resolution  $\alpha$  on the width  $H$  of the gap between the source and the substrate.

1 - Settling rate,  $w$ ; 2 - resolution,  $\alpha$ .

Card 5/5

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i gaz.prom. no.1:17-19 Ia-Ma '65. (MIRA 18:8)



KOZLOV, V.V.; DAVYDOV, A.A.

Benzene derivatives. Part 3: Oxidative chlorination of benzene-sulfonic acids. Zhur.org.khim. 1 no.3:559-562 Mr '65.

(MIRA 18:4)

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KHRUSTALEVA, V.N.; PAPKOVA, K.V.; DAVYDOV, A.A.; BELOV, B.I.;  
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L 15941-66 EWT(m)/T/ENP(t)/ENP(b) IJP(c) JD

ACC NR: AT6002270

(A)

SOURCE CODE: UR/2564/65/006/000/0350/0354

AUTHOR: Davydov, A. A.; Demenkov, N. M.; Lishina, L. V.; Maslov, V. N.

ORG: none

TITLE: Study of the crystallization of a germanium melt between flat plates.  
(Paper presented at the Third Conference on Crystal Growing held in Moscow from 18 to 25 November, 1963.)

SOURCE: AN SSSR. Institut kristallografi. Rost kristallov, v. 6, 1965, 350-354

TOPIC TAGS: crystallization, germanium, silicon alloy, germanium alloy, germanium single crystal

ABSTRACT: The aim of the study was to determine the factors affecting the formation of germanium single crystals, the perfection of their structure, and the crystallographic orientation during crystallization of drops of melt between flat crystallization plates made of various materials. When quartz and then graphite plates were used, the instant of crystallization of supercooled drops of the germanium melt could be observed by the glow emitted as a result of the latent heat of crystallization. The yield of single crystals was affected by the following factors: plate material, furnace atmosphere, temperature  
Card 1/2

L 15941-65

ACC NR: AT6002270

conditions of melting, and degree of alloying of the melt. All the polycrystalline samples obtained are divided into three groups: polysynthetic twins, polycrystals with many nuclei, and a combination of these two, i.e., a mixed type of polycrystals. The crystallographic orientation was determined by x-ray and microoptical methods, and the dislocation density was measured. Crystallization between flat plates was also used to prepare a germanium-silicon alloy containing 5 at. % Si, which was shown to be homogeneous. This is explained by crystallization conditions involving a high linear rate, which minimizes the segregation of silicon. Orig. art. has: 6 figures.

SUB CODE: 29 / SUBM DATE: none / OTH REF: 003

FW  
Card 2/2